



## Engineering is Elementary (EiE)

### 2015-2016 Scale-Up Program

**Overview:** Engineering is Elementary is a research-based, standards-driven, and classroom-tested curriculum that integrates engineering and technology concepts and skills with elementary science topics.

**Grade Levels:** 1-6

#### Program Summary

Children are born engineers—they are fascinated with building, with taking things apart, and with how things work. However, K-12 educational settings have traditionally done little to develop children's engineering and technological literacy.

The Engineering is Elementary (EiE) project fosters engineering and technological literacy among elementary-level students. EiE has created a research-based, standards-driven, and classroom-tested curriculum that integrates engineering and technology concepts and skills with elementary science topics. EiE also connects with literacy and social studies.

Grant Wood Area Education Agency will partner with the Museum of Science, Boston in providing professional development. To date, EiE has reached over 2.7 million students and 32,000 educators and is presently used in all fifty states. EiE units are designed to engage students in the engineering design process and include:

- Storybooks—Features child characters from a variety of cultures and backgrounds, who introduce students to an engineering problem and challenge them to solve a problem similar to that faced by the main character;
- Lesson plans for educators—EiE educators guides include vocabulary, learning objectives, tie-in science content, detailed materials and preparation sections, and step-by-step instructions on how to facilitate each EiE activity;
- And, materials set appropriate materials to support the embedded investigations.

#### Project Description/Objectives

- Goal 1. Reach students who are underserved or underrepresented in STEM fields.
- Goal 2. Increase students' technological literacy.
- Goal 3. Increase elementary educators' ability to teach engineering and technology.
- Goal 4. Increase the number of schools or other organizations in Iowa that include engineering at the elementary level.

#### What does the project provide?

Engineering is a new discipline for elementary-level educators. To learn more about engineering and technology content and pedagogy, the EiE project offers professional development workshops.

- Professional Development:
  - New EiE Scale-Up award applicants will attend a full day of professional development;
  - And, returning EiE Scale-Up award applicants will attend a half-day webinar.
- Stipends, substitute pay reimbursement, and travel to attend professional development will be provided.
- Awarded applicants will receive funds for at least one EiE curriculum and materials set.

#### What is required by the applicant in order to implement this program?

- Attend a half-day or full-day professional development session;
- Use the EiE unit(s) in conjunction with (or soon after) a corresponding science unit is completed;
- And, teach the entire EiE unit, which takes 6-8 hours of instructional time to complete.

**Website to View Program and Standards Alignment:** [http://www.eie.org/sites/default/files/eielinked\\_ia\\_final\\_0.pdf](http://www.eie.org/sites/default/files/eielinked_ia_final_0.pdf)  
AND [www.eie.org/sites/default/files/eie\\_mapped\\_to\\_ngss.pdf](http://www.eie.org/sites/default/files/eie_mapped_to_ngss.pdf)

**Program Video:** <http://vimeo.com/31808766>